SEQUENCE LISTING

```
<110> MARQUESS, FOLEY LEIGH SHAW
    LAARVELD, BERNARD
    CLEVERLY BUCHANAN, FIONA
    VAN KESSEL, ANDREW GERALD
    SCHMUTZ, SHEILA MARIE
    WALDNER, CHERYL
```

<120> SYSTEMS AND METHODS FOR IMPROVING PROTEIN AND MILK PRODUCTION OF DAIRY HERDS

```
<130> 454313-3222US
```

<140>

<141>

<150> 10/770,307

<151> 2004-02-02

<150> 60/466,523

<151> 2003-04-29

<150> 60/509,775

<151> 2003-10-08

<150> CA 2/422,437

<151> 2003-03-18

<150> 60/456,489

<151> 2003-03-21

<160> 7

<170> PatentIn Ver. 3.2

<210> 1

<211> 596

<212> DNA

<213> Bos sp.

<400> 1

```
tctgaagacc tggatgcggg tggtaacgga gcacgtgggt gttctcggag atcgacgatg 60 tgccacgtgt ggtttcttct gtttcaggc cccagaagcc catcccggga aggaaaatgc 120 gctgtggacc cctgtatcga ttcctgtggc tttggcccta tctgtcttac gtggaggctg 180 tgcccatctg caaggtccag gatgacacca aaaccctcat caagacaatt gtcaccagga 240 tcaatgacat ctcacacacg gtagggaggg actgggagac gaggtagaac cgtggccatc 300 gcctggagga ccccagaggc tggcggagga ggctgtgcag ccttgcacag ggccccagtg 360 gcctggacgc ccccctggca taaagacagc tcctctctc ctccacttcc cttgcctcc 420 gccttctac tctcctcc cccagaccg aatcctagtg ccagagcca gaaggagtca 480 cagaggtcct ggggtccct tggcaggtgg ccagaaccc agcagcagtc cctctgggcc 540 tccatctcat ttctagaatg ttttagtcgt taggcattct tcctgcctgg taactg 596
```

<210> 2

```
<211> 596
 <212> DNA
 <213> Bos sp.
 <400> 2
 tctgaagacc tggatgcggg tggtaacgga gcacgtgggt gttctcggag atcgacgatg 60
 tgccacgtgt ggtttcttct gttttcaggc cccagaagcc catcccggga aggaaaatgc 120
gctgtggacc cctgtatcga ttcctgtggc tttggcccta tctgtcttac gtggaggctg 180
tgcccatccg caaggtccag gatgacacca aaaccctcat caagacaatt gtcaccagga 240
tcaatgacat ctcacacacg gtagggaggg actgggagac gaggtagaac cgtggccatc 300
ccgtggggga ccccagaggc tggcggagga ggctgtgcag ccttgcacag ggccccagtg 360
gccttctcac tctcctccct cccagaccgg aatcctagtg cccaggccca gaaggagtca 480
cagaggteet ggggteeet tggcaggtgg ccagaacee ageageagte cetetgggee 540
tccatctcat ttctagaatg ttttagtcgt taggcattct tcctgcctgg taactg
<210> 3
<211> 167
<212> PRT
<213> Bos sp.
<400> 3
Met Arg Cys Gly Pro Leu Tyr Arg Phe Leu Trp Leu Trp Pro Tyr Leu
Ser Tyr Val Glu Ala Val Pro Ile Arg Lys Val Gln Asp Asp Thr Lys
                                25
Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr
Gln Ser Val Ser Ser Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro
Gly Leu His Pro Leu Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala
Ile Tyr Gln Gln Ile Leu Thr Ser Leu Pro Ser Arg Asn Val Val Gln
                85
                                    90
Ile Ser Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala
           100
                                                  110
Ala Ser Lys Ser Cys Pro Leu Pro Gln Val Arg Ala Leu Glu Ser Leu
                           120
Glu Ser Leu Gly Val Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val
                       135
                                          140
Val Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Met Leu Arg Gln
                   150
                                      155
```

Leu Asp Leu Ser Pro Gly Cys 165

probe

gctaattata ttgtaagaca

<400> 7

<210> 4 <211> 20 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic primer <400> 4 agggatgcct ggacacaaga 20 <210> 5 <211> 22 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic primer <400> 5 attgccacca ccagcagcac ca 22 <210> 6 <211> 22 <212> DNA <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic probe <400> 6 catctgctat gcgaatgctt tg 22 <210> 7 <211> 20 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic

20